REMARKS

Claims 1 - 5 and 7-9 are all the claims pending in the application. Applicant cancels claims 6 and 10-13 by way of this Amendment.

Regarding the new matter objection to the disclosure, Applicant submits that numerous portions of the specification state that the axial length of the run-out preventing portion d is equal to or **less than** the roller effective length e. This description is provided on page 20, lines 4-6 and page 22, lines 16-18, for example. Moreover, Fig. 4 clearly illustrates that the axial length d is less than the effective length e. Thus, Applicant submits that the amendments to page 23 of the specification do not introduce new matter, and merely corrected a typographical error resulting from the translating of the document in English.

Still further, page 23 states that the axial length is "preferably 0.75 times longer than the roller effective length e." This sentence should be corrected to state that the axial length is --greater than 0.75 times the roller effective length e.--. This correction is clearly supported by the specification, particularly the following sentence at lines 9-16, which states the lower bounds of the axial length, i.e., 0.75 times or less the length e would be unsatisfactory. Thus, when the specification is read in its entirety, along with the Figures, one of ordinary skill in the art would understand that the axial length is no more than the roller effective length e, and preferably greater than 0.75 times the roller effective length, i.e., $0.75e < d \leq e$.

Turning to the § 112 rejections of claims 10-13, as discussed above, the specification repeatedly discusses the advantages to having an axial length that is less than or equal to the roller effective length. Moreover, the specification further states that the lower bounds of this axial length should be more than 0.75 times the roller effective length. See page 23, lines 9-16.

In view of the foregoing, claims 1 and 7-9 have been amended to include this subject matter that is found in claims 10-13. Claims 10-13 have been canceled accordingly.

None of the prior art teaches or suggests this limitation. Although Bessone discloses teeth 19, there is no disclosure of providing the relative dimensions of the present invention. Moreover, one would not have been motivated to modify Bessone to arrive at the claimed invention. See col. 3, lines 50-57 of Bessone, example.

In view of the foregoing, claims 1 and 2 are not anticipated by Bessone.

Moreover, claims 4 and 7-9 are not rendered unpatentable over the combination of Bessone and German '069. The '069 reference fails to provide the requisite motivation for providing the relative dimensions in Bessone. Thus, the combination of references would not have motivated one to arrive at the relative dimensions of the present invention. Thus, claims 4 and 7-9 are patentable.

Applicant submits that claim 3 is patentable because of the advantageous effects of claim 3, as discussed at page 19, lines 8-22. In particular, the physical structure of the present invention provides a superior design with respect to strength of the side plate of the retainer comprising a pair of ring-shaped side plates and a plurality of pillars. This aspect of the invention is lost with the combination of cited references.

Also, claim 5 is patentable because the advantageous effects described at page 25, line 21 through page. 27, line 12, which discuss the superior design. In particular, the provision of the ring-shaped side plates and plurality of pillars improve the strength of the present invention. This feature is lost with the combination of cited references.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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APPENDIX
VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE SPECIFICATION:

The specification is changed as follows:

Page 23, first full paragraph:

Therefore, the axial length of the run-out preventing portion with which the likelihood that the roller 10 is damaged when it is inserted into the pocket is kept as low as possible while the rotating performance thereof is maintained is equal to or less than the roller effective length e and preferably greater than 0.75 times [longer than] the roller effective length e. In a case where the axial length of the run-out preventing portion is set at 0.75 times or less the roller effective length e in length, when a retainer and roller assembly comprising a retainer and rollers is installed between races, the rollers are inclined, this making it difficult to so install the retainer and roller assembly. In addition, this leads to a cause for reducing the performance (noise control or the like) of the rollers.

IN THE CLAIMS:

Claims 6 and 10 - 13 are canceled.

The claims are amended as follows:

1. (Amended) A retainer for a rolling bearing comprising:

a rolling element receiving pocket for receiving a rolling element, said pocket being formed by finish-machining a blank pocket with a tool member while a machining part of said

tool member is inserted into said blank pocket in a radial direction of said retainer and then translated in an axial and revolving directions of said retainer,

wherein said machining part of said tool member has a sectional contour which coincides with a sectional configuration of said pocket in a cross section taken along the radial direction of said retainer after the formation of said pocket is completed,

wherein said rolling element is a roller,

said pocket is defined by a pair of ring-shaped side plates and a pair of pillars each having end portions which are respectively connected to said ring-shaped side plates,

said first pocket surface is formed on each of said pillar and said second pocket surface is formed on each of said ring-shaped side plates,

said first pocket surface is formed in an arc-shaped configuration in a cross section along the radial direction of said retainer, and

wherein roller run-out preventing portions are formed at end portions of said pillars in the radial direction of said retainer, the width of said pocket in the revolving direction of the retainer is made smaller than the diameter of said roller, said width being defined between adjacent roller run-out preventing portions and formed at an end thereof in the radial direction of said retainer,

wherein a run out preventing portion is equal to or less than a roller effective length e and more than 0.75 of the roller effective length e.

3. (Amended) [The] A retainer for a rolling bearing [bearings as set forth in Claim 2], comprising:

a rolling element receiving pocket for receiving a rolling element, said pocket being formed by finish-machining a blank pocket with a tool member while a machining part of said tool member is inserted into said blank pocket in a radial direction of said retainer and then translated in an axial and revolving directions of said retainer,

wherein said machining part of said tool member has a sectional contour which coincides with a sectional configuration of said pocket in a cross section taken along the radial direction of said retainer after the formation of said pocket is completed,

wherein said pocket comprises a first pocket surface facing toward the revolving direction of said retainer, a second pocket surface facing toward the axial direction of said retainer and an escaping recess disposed between said first and second pocket surfaces, and wherein said tool member comprises a first tool for finish-machining said first pocket surface and a second tool for finish-machining said second pocket surface and said escape recess,

wherein said rolling element is a roller, said pocket is defined by a pair of ring-shaped side plates and a pair of pillars each having end portions which are respectively connected to said ring-shaped side plates,

said first pocket surface is formed on each of said ring-shaped side plates,

said first pocket surface is formed into an arc-shaped configuration in a cross section along the radial direction of said retainer, and

a minimum plate width of said ring shaped side plates at said escaping recess is made uniform along the radial direction of said retainer.

4. (Amended) The retainer for rolling bearings as set forth in Claim 2, wherein [said rolling element is a roller,

said pocket is defined by a pair of ring-shaped side plates and a pair of pillars each having end portions which are respectively connected to said ring-shaped side plates,

said first pocket surface is formed on each of said pillar and said second pocket surface is formed on each of said ring-shaped side plates,

said first pocket surface is formed in an arc-shaped configuration in a cross section along the radial direction of said retainer, and

wherein roller run-out preventing portions are formed at end portions of said pillars in the radial direction of said retainer, the width of said pocket in the revolving direction of the retainer is made smaller than the diameter of said roller, said width being defined between adjacent roller run-out preventing portions and formed at an end thereof in the radial direction of said retainer, and] end portions of said run-out preventing portion in the axial direction of said retainer are separated from one of said side plates by escaping recesses[, whereby the length of said run-out preventing portion in the axial direction of said retainer is made shorter than the effective length of said roller].

5. (Amended) [The] A retainer for rolling bearings [as set forth in Claim 2] comprising:

a rolling element receiving pocket for receiving a rolling element, said pocket being formed by finish-machining a blank pocket with a tool member while a machining part of said tool member is inserted into said blank pocket in a radial direction of said retainer and then translated in an axial and revolving directions of said retainer,

wherein said machining part of said tool member has a sectional contour which coincides with a sectional configuration of said pocket in a cross section taken along the radial direction of said retainer after the formation of said pocket is completed,

wherein said pocket comprises a first pocket surface facing toward the revolving direction of said retainer, a second pocket surface facing toward the axial direction of said retainer and an escaping recess disposed between said first and second pocket surfaces, and wherein said tool member comprises a first tool for finish-machining said first pocket surface and a second tool for finish-machining said second pocket surface and said escape recess,

wherein said rolling element is a roller,

said pocket is defined by a pair of ring-shaped side plates and a pair of pillars each having end portions which are respectively connected to said ring-shaped side plates,

said first pocket surface is formed on each of said pillar and said second pocket surface is formed on each of said ring-shaped side plates,

said first pocket surface is formed in an arc-shaped configuration in a cross section along the radial direction of said retainer, and

wherein roller run-out preventing portions are formed at end portions of said pillars in the radial direction of said retainer, the width of said pocket in the revolving direction of the retainer is made smaller than the diameter of said roller, said width being defined between adjacent roller run-out preventing portions and formed at an end thereof in the radial direction of said retainer, and

a sectional configuration of said run-out preventing portion along the radial direction of the retainer on the pillar side is formed into a curved line smoothly connecting to said first pocket surface and having a radius of curvature protruding toward said pocket.

7. (Amended) A retainer for a roller bearing comprising:

a pair of ring-shaped side plates;

a plurality of pillars arranged in a retainer revolving direction and each having end portions respectively connected to said ring-shaped side plates;

a roller receiving pocket defined by said ring-shaped side plates and adjacent pillars of said pillars for receiving a roller,

wherein pocket surfaces are formed on sides of said pillars and side plates, recesses of said pocket are formed at portions where said pillars and said side plates are joined to each other, at least a portion of said pocket surface formed on the side of said pillar with which said roller is brought into contact is formed in an arc-shaped configuration in a cross section along a retainer radial direction, and

wherein a minimum plate width of each of said side plates at said recesses is made uniform along the retainer radial direction,

<u>wherein a roller run out preventing portion is provided at an end portion of said pillars, a and said roller run out preventing portion is equal to or less than a roller effective length e and more than 0.75 of the roller effective length e</u>.

8. (Amended) A retainer for a roller bearing comprising:

a pair of ring-shaped side plates;

a plurality of pillars arranged in a retainer revolving direction and each having end portions respectively connected to said ring-shaped side plates;

a roller receiving pocket defined by said ring-shaped side plates and adjacent pillars of said pillars for receiving a roller,

wherein pocket surfaces are formed on sides of said pillars and said side plates, recesses of said pocket are formed at portions where said pillars and said side plates are joined to each other, and at least a portion of said pocket surface formed on the side of said pillar with which said roller is brought into contact is formed into an arc-shaped configuration in a cross section along a retainer radial direction,

wherein roller run-out preventing portions are formed at end portions of said pillars in the retainer radial direction, the width of said pocket in a retainer revolving direction which is defined between adjacent roller run-out preventing portions and formed at an end thereof in the retainer radial direction is made smaller than the diameter of said roller, and end portions of each of said run-out preventing portion in a retainer axial direction are separated from said side plates by said recesses, whereby the length of said run-out preventing portion in the retainer axial direction is made shorter than [the] an effective length e of said roller but more than 0.75 of the roller effective length e.

9. (Amended) A retainer for a roller bearing comprising:

a pair of ring-shaped side plates;

a plurality of pillars arranged in a retainer revolving direction and each having end portions respectively connected to said ring-shaped side plates;

a roller receiving pocket defined by said ring-shaped side plates and adjacent pillars of said pillars for receiving a roller,

wherein pocket surfaces are formed on sides of said pillars and said side plates, recesses of said pocket are formed at portions where said pillars and said side plates are joined to each other, at least a portion of said pocket surface formed on the side of said pillar with which said roller is brought into contact is formed into an arc-shaped configuration in a cross section along a retainer radial direction.

a roller run-out preventing portion is formed at an end portion of said pillar in the retainer radial direction,

the width of said pocket in a retainer revolving direction which is defined by adjacent roller run-out preventing portions and formed at an end thereof in the retainer radial direction is made smaller than the diameter of said roller, and

a sectional configuration of said run-out preventing portion along the retainer radial direction on the pillar side is formed into a curved line smoothly connecting to said arc-shaped configuration of said pocket surface formed on the side of said pillar and having a radius of curvature protruding toward said pocket,

<u>wherein said run out preventing portion is equal to or less than a roller effective length e and more than 0.75 of the roller effective length e</u>.